

### **Claim Listing**

Claims 1-26 (Cancelled)

Claim 27 (Currently Amended): The device of claim 40 [[26]], wherein the stirrer is magnetically coupled to a stirring system.

Claim 28 (Previously Presented): The device of claim 27, wherein the stirring system rotates the stirrer at 100 rpm.

Claim 29 (Currently Amended): The device of claim 40 [[26]], further comprising a porous sparger operatively connected to the inlet.

Claim 30 (Currently Amended): The device of claim 40 [[26]], further comprising a valve to control the flow of carbon dioxide operatively connected to the reactor vessel.

Claim 31 (Currently Amended): The device of claim 30, wherein the valve is an electro-valve or a solenoid valve.

Claim 32 (Currently Amended): The device of claim 40 [[26]], further comprising an electrode to measure pH being disposed within the reactor vessel.

Claim 33 (Currently Amended): The device of claim 40 [[26]], wherein the reactor vessel includes a coating to avoid deposition or incrustation of carbonated calcium phosphate.

Claim 34 (Currently Amended): The device of claim 40 [[26]], wherein the reactor vessel is fashioned from borosilicate glass or stainless steel.

Claim 35 (Currently Amended): The device of claim 40 [[26]], wherein the reactor vessel has a volume ranging from 1 to 500 liters.

Claim 36 (Currently Amended): The device of claim 40 [[26]], wherein the reactor vessel has a volume ranging from 1 to 150 liters.

Claim 37 (Currently Amended): The device of claim 40 [[26]], wherein the reactor vessel further comprises a double jacket.

Claim 38 (Currently Amended): The device of claim 40 [[26]], further comprising a thermo-circulator.

Claim 39 (Currently Amended): The device of claim 40 [[26]], wherein the heating element maintains the reactor vessel temperature between 5 and 50 °C.

Claim 40 (Currently Amended): ~~The A device of claim 26, wherein the implant support comprises~~ for coating an implant comprising:

- (a) a reactor vessel;
- (b) a heating element operatively connected to the reactor vessel;
- (c) a hook operatively connected within the reactor vessel;
- (d) a stirrer disposed within the reactor vessel;
- (f) an inlet and an aperture operatively connected to the reactor vessel;
- (g) a controlled source of carbon dioxide operatively connected to the inlet, wherein the aperture is configured to avoid increasing internal pressure of the reactor vessel.

Claim 41 (Currently Amended): The device of claim 40 [[26]], further comprising an automated system to measure, record and/or control parameters as a function of time.

Claim 42 (Previously Presented): The device of claim 41, wherein said parameters are selected from the group consisting of pH, temperature, carbon dioxide flow, calcium concentration, phosphate concentration, and carbonate concentration.

Claim 43 (Currently Amended): The device of claim 40 [[26]], further comprising a membrane filter operatively connected to the inlet.

Claim 44 (Previously Presented): The device of claim 43, wherein the membrane filter is a 0.2 micron membrane filter.

Claim 45 (Currently Amended): A device for coating an implant comprising:

- (a) a reactor vessel;
- (b) a heating element capable of maintaining a temperature between 5 and 50 °C, operatively connected to the reactor vessel;
- (c) ~~an implant support~~ a hook operatively connected within the reactor vessel;
- (d) a stirrer disposed within the reactor vessel, which is magnetically coupled to a stirring system;
- (e) an electrode to measure pH operatively connected to the reactor vessel;
- (f) an inlet operatively connected to the reactor vessel and operatively connected to a valve to control the flow of carbon dioxide;
- (g) a source of carbon dioxide operatively connected to the valve to control the flow of carbon dioxide; and
- (h) an aperture operatively connected to the reactor vessel, wherein the aperture is configured to avoid increasing internal pressure of the reactor vessel.

Claim 46 (Currently Amended): A device for coating an implant comprising:

- (a) a reactor vessel;
- (b) a heating element capable of maintaining a temperature between 5 and 50 °C, operatively connected to the reactor vessel;
- (c) ~~an implant support~~ a hook operatively connected within the reactor vessel;
- (d) a stirrer disposed within the reactor vessel, which is magnetically coupled to a stirring system;
- (e) an electrode to measure pH operatively connected to the reactor vessel;
- (f) an inlet operatively connected to the reactor vessel and operatively connected to a valve to control the flow of carbon dioxide;
- (g) a source of carbon dioxide operatively connected to the valve to control the flow of carbon dioxide;

(h) an aperture operatively connected to the reactor vessel, wherein the aperture is configured to avoid increasing internal pressure of the reactor vessel; and

(i) an automated system to measure, record and/or control parameters selected from the group consisting of pH, temperature, carbon dioxide flow, calcium concentration, phosphate concentration, and carbonate concentration.

Claim 47 (Currently Amended): The device of claim 40 [[26]], further comprising an outlet condenser operatively connected to the reactor vessel.

Claim 48 (Previously Presented): The device of claim 45, further comprising an outlet condenser operatively connected to the reactor vessel.

Claim 49 (Previously Presented): The device of claim 46, further comprising an outlet condenser operatively connected to the reactor vessel.